

ABSTRACT

[00144] A system and a method by which workpieces are bonded to and debond from a manufacturing fixture using a radiation responsive adhesive as a bonding agent. The system includes curing the adhesive agent during loading within seconds, and structurally weakens the adhesive bond during unloading within seconds. During the workpiece loading cycle, an adhesive dispenser deposits radiation responsive adhesive on to a load bearing, light transmittive surface, known as gripper pins. The workpiece is subsequently pushed against the locators, and towards the gripper pins causing the adhesive to interpose between workpiece and gripper pins, curing radiant energy is transmitted through the gripper pins and on to the adhesive to cure adhesive and bond the workpiece to the fixture. Therefore, the bond is structurally weakened or debonded in order to remove the workpiece from the fixture after manufacturing.